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EPA Superfund
Explanation of Significant Differences:

PAOLI RAIL YARD
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EXPLANATION OF SIGNIFICANT DIFFERENCES
Paoli Rail Yard Superfund Site
Paoli, Chester County, Pennsylvania

Introduction

This Explanation of Significant Differences ("ESD") presents the details of a change to the remedy selected in the July 21, 1992 Record of Decision ("ROD").

The Paoli Rail Yard Superfund Site ("the Site") is located north of the town of Paoli, in Chester County, Pennsylvania. The Site includes the twenty-eight acre Rail Yard and the surrounding 400-acre watershed. The Rail Yard property is bordered by Central Avenue to the north (and several private residential properties), North Valley Road to the west, the Amtrak Harrisburg Rail Line to the south and the turnaround track to the west. A residential area lies the north of the Rail Yard and a commercial development to the south. Lancaster Avenue (US Route 30) is south of the Rail Yard and is the main street in Paoli. The watershed includes three tributaries (Cedar Hollow, Hollow, and North Valley) to Little Valley Creek and Valley Creek.

When the remedy was selected in the 1992 ROD, the Paoli Rail Yard was an active rail car maintenance facility. In January 1995, the Southeastern Pennsylvania Transportation Authority ("SEPTA"), relocated these maintenance operations to another facility. The Car Shop at the Site is no longer in use, and continues to degrade. This ESD changes the "Rail Yard, and Buildings" alternative selected in the ROD from decontamination of buildings to decontamination and demolition of buildings and structures. Additionally, the Worker Protection Stipulation is discontinued since there are no longer workers in the Car Shop.

This ESD is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act, as amended,("CERCLA"), 42 U.S.C. º 9617(a) and the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), Section 300.435(c)(2)(i). The differences in this ESD significantly change, but do not fundamentally alter, the remedy selected in the ROD with respect to scope, performance, or cost. This document will be incorporated into the Administrative Record maintained for this Site required by NCP Section 300.825(a)(2). This Administrative Record is available for review at:

Paoli Public Library
18 Darby Road
Paoli, Pennsylvania 19301
(610) 296-7996

US EPA Region III Library
841 Chestnut Building
Philadelphia, PA 19107
Hours: 8 AM to 4 PM Monday - Friday
Contact: Ms. Anna Butch (215) 566-3157

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Summary of Site History, Contamination, and Selected Remedy

The Paoli Rail Yard was used for storage and maintenance of passenger rail cars. The Harrisburg Rail Line, which passes through the Rail Yard, is used for passenger and freight transportation. The southernmost section of the track is referred to as the turnaround track, and was used to transfer rail cars between the Car Shop and the Harrisburg Rail Line.

The Car Shop dates to 1915, when the Rail Yard was built. The shop was designed to accommodate the repair of passenger rail cars, which were steam-powered at the time. The rail lines were later converted to electrical power, at which time mineral oil was used to cool the transformers in the trains. In the 1950's, polychlorinated biphenyls ("PCBs") replaced the mineral oil in the transformers. PCBs in railroad transformers are released during servicing and also by volatilizing when overheated during operation. SEPTA replaced the PCB fluids in the rail car transformers with other coolants during a retro-fill program which was completed in 1986.

Ownership of the Rail Yard has changed several times since 1915. The yard is now owned by the National Railroad Passenger Corporation ("Amtrak") and is operated by SEPTA. The yard was originally owned and operated by the Pennsylvania Railroad. When the Pennsylvania Railroad and the New York Central Railroad merged in 1968, the yard was operated by the new Penn Central Transportation Company ("PCTC"). Amtrak took ownership of the Rail Yard during the bankruptcy reorganization of PCTC in 1976. TheConsolidated Rail Corporation ("Conrail") operated the yard, during Amtrak ownership, from 1976 until 1982 when SEPTA took over operations.

The Commonwealth of Pennsylvania issued an Administrative Order in 1979 pursuant to the clean Streams Law against the Rail Companies which required investigation and cleanup of the Rail Yard. EPA's 'involvement with

the PCB contamination at the Site began as a result of investigations conducted pursuant to the Agency's authority under the Toxic Substances Control Act ("TSCA"), 15 U.S.C. °° 2601 to 2671. Information received from the Rail Companies in response to TSCA subpoenas issued in 1985 revealed that extremely elevated levels of PCBs were present onsite. As a result, the United States, the Commonwealth of Pennsylvania, and the Rail Companies, SEPTA, Amtrak, and Conrail had entered into five (5) separate partial Consent Decrees ("CDs") which addressed various clean-up activities and worker protection measures at the Rail Yard and in the surrounding community.

Under the third CD, the Rail Companies performed a Remedial Investigation/Feasibility Study ("RI/FS") for the Site to determine the nature and extent of contamination and alternatives for remediation. Additionally, as a part of this CD, the United States and the defendants entered into a Worker Protection Stipulation which addressed contamination inside the Car Shop. The stipulation called for, among other things, decontamination of specific areas in the Car Shop and implementation of a routine maintenance program for particular areas including the lunchroom, locker room ("clean-side/ worker- side" lockers; laundry service), offices and other work storage areas.

On July 21, 1992. after a public comment period, EPA issued the ROD for the Site. The Selected remedy includes the following major components:

- Excavation and on-site treatment of 28,000 cubic yards of contaminated Rail Yard soils using a solidification/stabilization process for soils with PCB concentrations exceeding 25 parts per million ("ppm"). The treated soil would be placed back on the Rail Yard in a containment cell. Long-term ground water monitoring would be required in the immediate vicinity of the containment cell;

- Erosion and sedimentation controls to manage and control storm water runoff and sediment from the Rail Yard;

- Development of deed restrictions on the Rail Yard to protect the integrity of the remedy, prohibit use of the property for residential or agricultural purposes, and prohibit the use of on-site ground water for domestic purposes;

- Decontamination of buildings and structures on the Rail Yard property to minimize exposure to persons working the Site. This would involve decontaminating approximately 35,000 square feet of high contact surfaces in the Car Shop buildings having PCB concentrations in excess of 10 Ig/100 cm#. Depending on the type of surface, decontamination would be accomplished by wiping with a solvent, applying a chemical foam, shot blasting, or similar methods;

- Excavation and treatment of PCB-contarninated residential soils. The cleanup standard is to achieve an average PCB concentration of 2 ppm for each individual property. Excavated soil would be returned to the Rail Yard property and treated using the solidification/stabilization process;

- Pumping of ground water contaminated with fuel oil at the Rail Yard using extraction wells, fuel oil recovery, ground water treatment using filtration and activated carbon, and discharge of the treated ground water on-site through a subsurface infiltration gallery. The recovered fuel oil is disposed off-site at an approved RCRA facility. This remedial alternative is currently being implemented;

- Long-term ground water monitoring to evaluate the effectiveness of ground water pumping and treatment system and fuel oil recovery system;

- Excavation and treatment of stream sediments along North Valley Creek, Hollow Creek, and Cedar Hollow Creek (all tributaries to Little Valley Creek) and Little Valley Creek and Valley Creek with PCB concentrations exceeding 1 ppm. Contaminated sediments would be returned to the Rail Yard and treated using solidification/stabilization. Adverse impacts to the stream(s) and surrounding area shall be mitigated to the maximum extent practicable.

The Car Shop was SEPTA's Western-most commuter car facility and served for several years as SEPTA's sole maintenance facility. Long term heavy repair service to SEPTA's 304 multiple unit electric commuter car fleet was provided here. Operations at the Car Shop included brake inspection and service, preventative maintenance programs, heavy long-term repairs, transformer repairs and conversions and rebuilding of car components.

In January 1995 SEPTA maintenance operations were relocated to another property. Since the Car Shop is no longer in use, demolishing the building will permanently remove the risk of exposure to and release of PCBs

into the environment as would happen as the building degrades.

Description of the Significant Differences and the Basis for those Differences

The selected remedy in the 1992 ROD called for decontamination of the Car Shop since it was still an operating facility. This alternative would have involved decontamination of approximately 35,000 square feet of high contact surfaces which had PCB concentrations in excess of 10Ig/100cm#. Decontamination would have been accomplished by several different methods depending on the type of surface material, and would have generated waste material for disposal. The capital cost of this alternative in 1992 was $260,000. Since some of the PCB contamination would have been allowed to remain on-site under this alternative, ongoing maintenance would have been necessary to ensure the remedy remained protective. The Worker Protection Stipulation would also have continued under this alternative, and was estimated to cost approximately $117,875 annually.

The modified remedy is decontamination, as necessary, of the Car Shop and associated buildings in preparation for demolition. Materials from the demolition will then be recycled and/or transported off-site for disposal. This alternative was presented during the public comment period in 1992 and was in the proposed plan, but was not selected since the Car Shop was operational at that time.

This modified remedy will decontaminate the Car Shop and associated buildings, as necessary, and then the buildings will be demolished. The materials from the demolition will be recycled and/or disposed of in a permitted off-site landfill. A pre-design study will be conducted to determine the methods to accomplish these activities. All materials with PCBs in excess of 50 ppm will be separated from the rest of the materials and either disposed off-site in a TSCA landfill, or decontaminated and recycled or disposed of off-site in a permitted facility.

The capital cost in 1992 was $1,000.000 if the material could be disposed as non-PCB waste. This figure is not significant when viewed in context of the total remedy, which has a capital cost of approximately $25 million. Therefore, the increase in cost represents approximately 4% difference in the total cost of the remedy. The Worker Protection Stipulation will be discontinued since workers will no longer be exposed to PCBs in the Car Shop.

Support Agency Comments

The Commonwealth of Pennsylvania concurs with this ESD.

Affirmation of the Statutory Determinations

EPA believes that the revised remedy remains protective of human health and the environment, complies with federal and state requirements that were identified in the ROD as applicable or relevant and appropriate to this remedial action at the time this ROD was signed, and is cost-effective. In addition, the revised remedy utilizes permanent solutions and alternative treatment and resource recovery technologies to the maximum extent practicable for this Site.

Public Participation Activities

This ESD and the information upon which it is based are included in the Administrative Record file for this Site.

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